

**Abstract of the Disclosure**

This invention relates to a process for making hydrogen peroxide in a microchannel reactor. The process comprises flowing a process feed stream and a staged addition feed stream in a process microchannel in contact with each other to form a reactant mixture comprising  $O_2$  and  $H_2$ , and contacting a catalyst with the reactant mixture in the process microchannel to convert the reactant mixture to a product comprising hydrogen peroxide; transferring heat from the process microchannel to a heat exchanger; and removing the product from the process microchannel.